Special Issue

Microwave Indices from Active and Passive Sensors for Remote Sensing Applications

Message from the Guest Editors

Dear Colleauges, Past research well assessed the capabilities of satellite sensors operating at microwaves, both active (SAR, Scatterometers) and passive (Radiometers), for the remote sensing of Earth surface. Besides brightness temperature and backscattering coefficient, microwave indices, defined as a combination of data collected at different frequencies and polarizations, revealed a good sensitivity to hydrological cycle parameters such as the surface soil moisture, the vegetation water content, the snow depth and its water equivalent. The differences between microwave backscattering and emission at more frequencies and polarizations have been well related to these parameters, so that operational retrieval algorithms have been developed basing on microwave indices. This special issue aims at providing an overview of microwave signal capabilities in estimating the main land parameters of the hydrological cycle, e.g. soil moisture, vegetation water content and snow water equivalent, on both local and global scales, with a particular focus on the microwave indices applications.

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Message from the Editor-in-Chief

Remote Sensing is now a prominent international journal of repute in the world of remote sensing and spatial sciences, as a pioneer and pathfinder in open access format. It has highly accomplished global remote sensing scientists on the editorial board and a dedicated team of associate editors. The journal emphasizes quality and novelty and has a rigorous peer-review process. It is now one of the top remote sensing journals with a significant Impact Factor, and a goal to become the best journal in remote sensing in the coming years. I strongly recommend Remote Sensing for your best research publications for a fast dissemination of your research.

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